

Applicant : Robert Zhong LU et al.
Serial No. : 09/265,788
Filed : March 10, 1999
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Attorney's Docket No.: 08291-482001 / 10254P3



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REMARKS

Claims 1, 2, 4-9, and 11-18 are pending. Applicants propose to amend claim 17 to delete a repeated claim element. Although this amendment is made after final, Applicants submit that this amendment would not add any new matter and would place all of the claims in condition for allowance. Accordingly, Applicants respectfully request that the amendment be entered.

Rejection under 35 U.S.C. § 112

Claim 17 was rejected under 35 U.S.C. § 112, second paragraph. Applicants submit that the amendment to claim 17 proposed above would overcome this rejection by clarifying that the two references to further non-ionic surfactant indeed referred to the same material.

Rejection under 35 U.S.C. § 103

Claims 1, 2, 4-9, and 11-18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Richter (US 5,728,667). Applicants respectfully traverse this rejection.

All of the pending claims are directed to aqueous disinfecting and cleaning compositions that include "a mitigating effective amount of at least one nonionic surfactant selected from alkylpolyglycoside compounds." As noted at page 2, lines 14-18, of the Specification, "there yet remains a real and continuing need in the art for improved cleaning and disinfecting compositions in general, and in specific such compositions which provide at least one . . . of the following characteristics: . . . low irritancy to the end user of the composition . . ." As is also noted at page 2, lines 27-29, the present formulations achieve the desired results and provide a "surprising, . . . synergistic effect not apparent from the prior art."

The examiner correctly points out that Richter disclosed a germicidal light-duty aqueous dishwashing detergent composition. The examiner also correctly points out that Richter stated that "certain nonionic surfactant compositions are known to be generally milder detergents." However, Applicants can find no identification of those "certain nonionic surfactant compositions" to which Richter refers in this statement, and the examiner has not pointed out where such an identification can be found. To be sure, Richter's compositions include 0-40 parts

nonionic surfactant (Richter, col. 5, line 10), where the nonionic surfactant can be any of a large number of surfactants set forth at column 7, line 64, to column 11, line 5, or, further, any of the nonionic surfactants listed in McCutcheon's *Emulsifier & Detergents North American Edition*, 1991 (referenced at col. 8, lines 9-10, of Richter). Moreover, alkylpolyglycosides are, indeed, disclosed by Richter (e.g., at col. 9, line 54, to col. 10, line 16, and at col. 10, lines 54-62), but no disclosure is made of the properties (e.g., mildness) of such compounds,¹ let alone of their irritancy or lack thereof vis-a-vis other nonionic surfactants.

As indicated by the Material Safety Data Sheet (MSDS) attached hereto as Appendix A, APG 325 N, an alkylpolyglycoside surfactant, "causes eye irritation" and contact with eyes is to be avoided. More specifically, the MSDS states that APG 325 N produce[s] severe irritation and corneal opacity." On the basis of such statements, one of skill in the art would surely not deduce that alkylpolyglycoside surfactants such as APG 325 N would be useful as mitigating agents. And, yet, that is just the idea on which Applicants invention is in part based.

As described, for example, at page 5, lines 3-20, and at page 11, line 1 *et seq.*, Applicants have unexpectedly discovered that alkylpolyglycosides, known ocular irritants as explained above, paradoxically can be used to mitigate potential ocular irritation caused by aqueous hard surface cleaning and sanitizing compositions containing quaternary ammonium compounds having germicidal properties: "[t]he inclusion of the alkylpolyglycoside compound to the compositions significantly reduces the irritation potential of the aqueous compositions as compared to like compositions which however omit this constituent" (Specification, at page 11, lines 1-3).

There is no suggestion in Richter, or in any other reference of which Applicants are aware, of such a mitigating effect from alkylpolyglycosides. Whether or not Richter may have recognized, in principle, the "importance of a mitigating effect" (as argued by the examiner; Office action, at page 4, last paragraph), Richter in any event did not suggest that alkylpolyglycosides could be used to achieve such an effect. In the absence of any such suggestion, the reference could not have rendered the present claims obvious. Based on what

¹ The examiner alleges that "alkylpolyglycoside is taught as a preferred surfactant by Richter (see col. 10, lines 59-60)" (Office action, at page 4, first paragraph). Applicants submit that the cited passage does not indicate that alkylpolyglycosides are "preferred." In fact, there does not appear to be any statement of such a preference anywhere in the reference.

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was known at the time the present application was filed, as evidenced by the MSDS attached as Appendix A, one of skill in the art would have been motivated to avoid the use of alkylpolyglycosides in any compositions for which low ocular irritancy was sought.

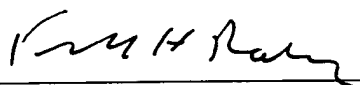
Accordingly, Applicants submit that all of the pending claims are clearly non-obvious over Richter, and request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Enclosed is a \$400 check for the Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 20 Dec. 01

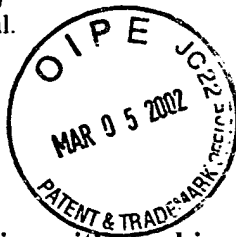


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Version with markings to show changes made

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In the claims:

Claim 17 has been amended as follows:

17. An aqueous disinfecting and cleaning composition in a concentrated form which exhibits reduced irritancy according to claim 1 which consists essentially of:

a disinfecting effective amount of a quaternary ammonium compound having germicidal properties;

a mitigating effective amount of a binary surfactant system which comprises both (a) at least one nonionic surfactant selected from alkylpolyglycoside compounds, with (b) at least one further nonionic surfactant compound which is based on a polymeric alkylene oxide block copolymer;

[0.1 - 8%wt of at least one further nonionic surfactant;]

0 - 3%wt. of a polymeric cationic surfactant based on a polyquaternary ammonium salt;

0 - 3%wt. of a builder;

0 - 5%wt. of one or more conventional additives selected from coloring agents, fragrances and fragrance solubilizers, viscosity modifying agents such as thickeners, pH adjusting agents and pH buffers including organic and inorganic salts; and,

water to form 100%wt. of the aqueous disinfecting and cleaning composition in concentrated form.

HENKEL CORPORATION
CHEMICALS GROUP

Material Safety Data Sheet

EMERGENCY PHONE: (513) 482-2297

CHEMTREC 800-424-9300

MS REFERENCE: EMERY 5451 (1/15/97)

SECTION I - IDENTIFICATION

WARNING! CAUSES EYE IRRITATION!

AVOID CONTACT WITH EYES. WASH THOROUGHLY AFTER HANDLING.

PRODUCT: APG* 325 N

* APG IS A REGISTERED TRADEMARK OF HENKEL CORPORATION

SYNONYMS: ALKYL POLYGLYCOSIDE SURFACTANT

CHEMICAL: D-GLUCOPYRANOSIDE, C9-11 ALKYL, OLIGOMERIC

CAS NO: 132778-08-6

MSD HAZARD: ACUTE (SECTION 311/312)

TITLE III SECTION 313- NOT LISTED

SECTION II - INGREDIENTS AND HAZARD CLASSIFICATION

COMPOSITION	%	PEL/TLV	HAZARD
ALKYL POLYGLYCOSIDE (132778-08-6)	50	NONE/NONE	EYE IRRITANT
WATER (7732-18-5)	AP. 50	NONE/NONE	NONE

SECTION III - HEALTH INFORMATION

INHALATION: NO DATA AVAILABLE

INGESTION: ACUTE ORAL LD50: > 5.0 G/KG IN MALE AND FEMALE SPRAGUE-DAWLEY RATS.

EYE CONTACT: 0.1 ML OF PRODUCT WAS INSTILLED INTO THE EYES OF SIX RABBITS. AFTER A 21-DAY OBSERVATION PERIOD THE MAXIMUM TOTAL EYE IRRITATION SCORES RANGED FROM 59-78 (SCALE 0-110). THE MATERIAL PRODUCED SEVERE IRRITATION AND CORNEAL OPACITY WHICH PERSISTED THROUGH DAY 21. NO EVIDENCE OF CORROSION WAS NOTED.

SKIN CONTACT: THE PRIMARY SKIN IRRITATION SCORE WAS 1.2 (RABBIT) (SCALE 0-8). THE MATERIAL WAS CLASSIFIED AS A MILD SKIN IRRITANT. THE ACUTE DERMAL LD50 VALUE WAS GREATER THAN 2.0 G/KG IN MALE AND FEMALE NEW ZEALAND WHITE RABBITS.

SECTION IV - OCCUPATIONAL EXPOSURE LIMITS

L: NO OSHA PEL

V: NO ACGIH TLV

SECTION V - EMERGENCY FIRST AID PROCEDURE

R OVEREXPOSURE BY SWALLOWING: CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

R OVEREXPOSURE BY SKIN CONTACT: IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER WHILE REMOVING CONTAMINATED CLOTHING.

R OVEREXPOSURE BY EYE CONTACT: IMMEDIATELY FLUSH EYES WITH PLENTY OF COOL WATER FOR AT LEAST 15 MINUTES. DO NOT LET VICTIM RUB EYES. GET MEDICAL ATTENTION IMMEDIATELY.

R OVEREXPOSURE BY INHALATION: IMMEDIATELY REMOVE VICTIM TO FRESH AIR. IF VICTIM HAS STOPPED BREATHING GIVE ARTIFICIAL RESPIRATION, PREFERABLY BY MOUTH-TO-MOUTH. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI - PHYSICAL DATA

BOILING POINT: >212 DEG F

MELTING POINT: NOT DETERMINED

VAPOR PRESSURE: NOT DETERMINED

SPECIFIC GRAVITY: 1.1

VAPOR DENSITY (AIR=1): NOT DETERMINED

SOLUBILITY IN WATER: MISCIBLE

APPEARANCE AND COLOR:

CLEAR, VISCOUS, LIGHT-YELLOW LIQUID; MILD CHARACTERISTIC ODOR

SECTION VII - FIRE AND EXPLOSION HAZARDS

FLASH POINT & METHOD USED: >200 DEG F (>93 DEG C) (CLOSED CUP)

AUTO-IGNITION TEMPERATURE: NOT DETERMINED

FLAMMABLE LIMITS IN AIR, % BY VOL. LOWER: NOT DETERMINED

FLAMMABLE LIMITS IN AIR, % BY VOL. UPPER: NOT DETERMINED

FPA RATING: NO NFPA RATING

MIS RATING: HEALTH (2) FIRE (1) REACTIVITY (0)

SPECIAL FIRE FIGHTING PROCEDURES & PRECAUTIONS

THIS PRODUCT WILL PRODUCE FOAM WHEN MIXED WITH WATER. (INDIVIDUALS SHOULD PERFORM ONLY THOSE FIRE FIGHTING PROCEDURES FOR WHICH THEY HAVE BEEN TRAINED). USE WATER SPRAY, DRY CHEMICAL, FOAM OR CARBON DIOXIDE. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL. IF A SPILL OR LEAK HAS NOT IGNITED, USE WATER SPRAY TO DISPERSE THE VAPORS. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM FIRE AND TO DILUTE SPILLS TO NONFLAMMABLE MIXTURES.

UNUSUAL FIRE & EXPLOSION HAZARDS

FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS IN THE POSITIVE-PRESSURE MODE WITH A FULL FACEPIECE WHEN THERE IS A POSSIBILITY OF EXPOSURE TO SMOKE, FUMES OR HAZARDOUS DECOMPOSITION PRODUCTS.

SECTION VIII - REACTIVITY

STABILITY:

GENERALLY STABLE

HAZARDOUS POLYMERIZATION:

NONE LIKELY

CONDITIONS & MATERIALS TO AVOID:

AVOID CONTACT WITH STRONG ACIDS AND OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

DECOMPOSITION MAY PRODUCE CARBON MONOXIDE AND CARBON DIOXIDE.

SECTION IX - EMPLOYEE PROTECTION

CONTROL MEASURES:

HANDLE IN THE PRESENCE OF ADEQUATE VENTILATION.

RESPIRATORY PROTECTION:

RECOMMENDED EXPOSURE LIMITS (i.e., OSHA-PEL AND ACGIH-TLV) HAVE NOT BEEN ESTABLISHED FOR THIS MATERIAL. WHETHER THERE IS A NEED FOR RESPIRATORY PROTECTION UNDER YOUR CONDITIONS OF HANDLING OF THIS MATERIAL SHOULD BE EVALUATED BY A QUALIFIED HEALTH SPECIALIST.

PROTECTIVE CLOTHING:

WEAR GLOVES AND PROTECTIVE CLOTHING WHICH ARE IMPERVIOUS TO THE PRODUCT FOR THE DURATION OF ANTICIPATED EXPOSURE IF THERE IS POTENTIAL FOR PROLONGED OR REPEATED SKIN CONTACT.

EYE PROTECTION:

WEAR SAFETY GLASSES MEETING THE SPECIFICATIONS OF ANSI STANDARD Z87.1 WHERE NO CONTACT WITH THE EYE IS ANTICIPATED. CHEMICAL SAFETY GOGGLES MEETING THE SPECIFICATIONS OF ANSI STANDARD Z87.1 SHOULD BE WORN WHENEVER THERE IS THE POSSIBILITY OF SPLASHING OR OTHER CONTACT WITH THE EYES.

SECTION X - ENVIRONMENTAL PROTECTION

ENVIRONMENTAL PRECAUTIONS:

AVOID UNCONTROLLED RELEASES OF THIS MATERIAL. WHERE SPILLS ARE POSSIBLE, A COMPREHENSIVE SPILL RESPONSE PLAN SHOULD BE DEVELOPED AND IMPLEMENTED.

SPILL OR LEAK PRECAUTIONS:

WEAR APPROPRIATE RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING AS DESCRIBED IN SECTION IX. CONTAIN SPILLED MATERIAL. TRANSFER TO SECURE CONTAINERS. WHERE NECESSARY, COLLECT USING ABSORBENT MEDIA. IN THE EVENT OF AN UNCONTROLLED RELEASE OF THIS MATERIAL, THE USER SHOULD DETERMINE IF THE RELEASE IS REPORTABLE UNDER APPLICABLE LAWS AND REGULATIONS.

WASTE DISPOSAL:

ALL RECOVERED MATERIAL SHOULD BE PACKAGED, LABELED, TRANSPORTED, AND DISPOSED OR RECLAIMED IN CONFORMANCE WITH APPLICABLE LAWS AND REGULATIONS AND IN CONFORMANCE WITH GOOD ENGINEERING PRACTICES. AVOID LANDFILLING OF LIQUIDS. RECLAIM WHERE POSSIBLE.

SECTION XI - REGULATORY CONTROLS

DEPARTMENT OF TRANSPORTATION:

DOT CLASSIFICATION: NOT REGULATED

DOT PROPER SHIPPING NAME:

OTHER DOT INFORMATION:
OTHER REGULATORY REQUIREMENTS:
LISTED IN TSCA INVENTORY
ERCLA HAZARDOUS MATERIALS:
NONE NOTED

SECTION XII - PRECAUTIONS: HANDLING, STORAGE AND USAGE
FILLED MATERIAL MAY BE SLIPPERY. CLEAN UP SPILLS IMMEDIATELY BEFORE WALKING IN
PILL AREA.

The information presented herein is believed to be factual as it has been
derived from the works and opinions of persons believed to be qualified experts;
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representation for which Henkel Corporation bears legal responsibility. The
user should review any recommendations in the specific context of the intended
use to determine whether they are appropriate.

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DATE: 1/15/97
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